Health Services
LOS ANGELES COUNTY

Employee Patient Safety Handbook

2014

Quality Improvement and Patient Safety Program

PREFACE

The LA County Department of Health Services is proud to present this year's revised Employee Patient Safety Handbook. Composed of members from DHS facilities around the County, one of the Committee's primary purposes is to provide educational materials for workforce members on important Patient Safety topics.

Patient Safety is an issue important to all workforce members, whether you interact directly with patients, or provide a vital service to support care provision. While we are all encouraged to try our best and provide the highest quality service we can, simply trying hard is not enough to prevent accidental harm to patients. Learning the simple techniques described in this manual can go a long way toward preventing medical errors.

Please take a moment to review the contents of this booklet each year. If you have questions about how these materials that follow apply to your specific work environment, please feel free to discuss them with your supervisor. Remember that patient safety suggestions or concerns for unsafe conditions can also be reported using the online UHC Safety Intelligence™ system formerly known as Patient Safety Net (PSN) program.

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INTRODUCTION

Your facility's Patient Safety Program works with the Los Angeles County Department of Health Services (DHS) Quality Improvement and Patient Safety Program (QIPS) to provide a coordinated approach to keep our patients free from unjustified risk and preventable injury.

Utilizing input from multiple information sources, we work to prevent the occurrence of, or patient harm resulting from, lapses in optimal care.

The DHS Patient Safety Program provides:
• An organizational climate of safety with communication and teamwork as the core operating principles at all levels

• Ongoing assessment of risks to patients

• Recommendations to prevent injury through design and redesign of processes based on established safety principles and the limitations imposed by human factors

• Visibility of errors through a system of reporting of close calls and adverse events, supported by our Safe and Just Culture

• A process for coordinated response to unsafe conditions

• Assistance complying with regulatory requirements regarding patient safety (e.g.. The Joint Commission, California Department of Public Health)

• Assistance with disclosure of adverse events and medical errors to patients and/or families

• Patient safety education for health care providers through various modes of communication

The DHS Patient Safety Program is under the direction and supervision of the Director of Quality, Patient Safety, and Risk Management. The Director of Quality, Patient Safety, and Risk Management works collaboratively with the DHS Patient Safety Committees as well as representatives from your facility in the areas of Patient Safety, Administration, Risk Management, Infection Control, Pharmacy, Environmental Health & Safety, Medicine, Nursing, Ancillary Services, and other groups as needed to coordinate safe patient care.

MAKE IT HAPPEN!

Turning good ideas for better practices into a reality is everyone's responsibility. Leaders are responsible for setting priorities for improvement and setting goals. Managers are responsible for organizing workforce members to meet goals. All workforce members, including frontline patient care staff and support staff, are responsible for participating in improvement efforts.

What are the best ways for leaders and managers to support improvement efforts?

- Be open to new ways of doing things. Don't get stuck on "but this is how we've always done it!"
- New ideas need to be tested on a small scale. Learn about PDSA cycles (Google it!) and small tests of change.
- Encourage frontline staff to be involved in improvement efforts. Listen to their viewpoints and ideas.

What are the best ways for frontline staff to support improvement efforts?

- Share your ideas with your supervisors.
- Make time to participate in improvement efforts – join a committee, attend presentations, use educational materials available on the DHS Sharepoint site.
- Be open to trying something new. Give new ways of doing things a fair chance, then give feedback to your supervisor about what is and isn't working.

Over recent years, DHS facilities have made amazing improvements in our care processes, thanks to the participation of workforce members from all parts of our systems. Looking to the future, we have many more opportunities to make our medical centers and ambulatory care network safer, more efficient, and more effective. Be part of the positive changes!

GOALS AND STANDARDS FOR PATIENT SAFETY

The Joint Commission

Joint Commission Safety Goals and Standards
The Joint Commission is an independent accrediting organization whose mission is to continuously improve the safety and quality of care provided to patients. To maintain and earn accreditation, organizations must undergo an extensive on-

site review at least once every three years. During these unannounced reviews, organizations are expected to show compliance with the Joint Commission National Patient Safety Goals and Standards.

In July 2002, the Joint Commission approved its first set of six National Patient Safety Goals, each with their own set of recommendations for compliance. The purpose of the goals is to reduce the risk of adverse events and improve patient safety. The Joint Commission has since modified the goals on a periodic basis. The following is a list of the current National Patient Safety Goals for hospitals and ambulatory care settings. Several previous Safety Goals have been reclassified as Joint Commission Standards, and compliance with them is still required. Visit the Joint Commission's website at http://www.jointcommission.org for more information.

2014 National Patient Safety Goals

NPSG 01.01.01
- *Use at least two patient identifiers when providing care, treatment, or services.*

NPSG 01.03.01
- *Eliminate transfusion errors related to patient misidentification.*

NPSG 02.03.01 (hospital setting only)
- *Report critical results of tests and diagnostic procedures on a timely basis.*

NPSG 03.04.01
- *Label all medications, medication containers, and other solutions on and off the sterile field in perioperative and other procedural settings.*

NPSG 03.05.01
- *Reduce the likelihood of patient harm associated with the use of anticoagulant therapy.*

NPSG 03.06.01
- *Maintain and communicate accurate patient medication information.*

NPSG 06.01.01 (hospital setting only)
- *Improve the safety of clinical alarm systems.*

NPSG 07.01.01
- *Comply with either the current Centers for Disease Control and Prevention (CDC) hand hygiene guidelines or the current World Health Organization (WHO) hand hygiene guidelines.*

NPSG 07.03.01 (hospital setting only)
- *Implement evidence-based practices to prevent health care–associated infections due to multidrug-resistant organisms in acute care hospitals.*

NPSG 07.04.01 (hospital setting only)
- *Implement evidence-based practices to prevent central line–associated bloodstream infections.*

    Note: This requirement covers the short and long term central venous catheters and peripherally inserted central catheter (PICC) lines.

NPSG 07.05.01
- *Implement evidence-based practices for preventing surgical site infections.*

NPSG 07.06.01 (adult hospital setting only)
- *Implement evidence-based practices to prevent indwelling catheter-associated urinary tract infections (CAUTI).*

NPSG 15.01.01 (hospital setting only)
- *Identify patients at risk for suicide.*

    Note: This applies to patients being treated for emotional or behavioral disorders only.

UP 01.01.01
- *Conduct a pre-procedure verification process.*

UP 01.02.01
- *Mark the procedure site.*

UP 01.03.01
- *A time-out is performed before the procedure.*

A SAFE AND JUST CULTURE

DHS strives to build, maintain, and support a Safe and Just Culture. A Safe and Just Culture is one in which safety is an individual and organizational priority and where errors, near misses, adverse events, and safety or quality concerns can be easily reported. These reports are viewed as an opportunity to learn and improve upon the delivery of care.

Every DHS workforce member is responsible for reporting these events in a timely manner. Workforce members will not be punished or retaliated against for reporting an error, near miss, adverse event, or safety or quality concerns. However, individuals will be accountable for their own performance in accordance with their job responsibilities and DHS core values. Individuals will not carry the burden for system flaws over which they have no control.

Leadership will hold workforce members accountable for:

- behavior that knowingly put patients, visitors, or staff at risk of harm
- a conscious or willful disregard for organizational policies and procedures
- behavioral choices that are disruptive to the workplace environment (e.g. substance abuse)
- repetitive errors or repetitive at-risk behaviors that demonstrate an inability to fulfill legitimate work requirements

Please see DHS Policy "A Safe and Just Culture" 311.4 for more information.

REPORTING OF EVENTS AND NEAR MISSES

Reporting adverse events, errors, and near misses is the responsibility of all DHS employees. The purpose of reporting is to allow designated staff to begin investigating an event, to alert others to potentially adverse events so that future injuries are avoided, and to identify opportunities for performance improvement. Your facility depends on information reported by all members of your worksite team.

Adverse Events & Errors

Adverse events are defined as those incidents in which a person receiving care is harmed. The adverse event may or may not be related to an error. An error is defined as the failure of a planned action to be completed as intended or the use of a wrong plan to achieve an aim with actual or potential negative consequences for the patient. Employees who become aware of an adverse event or error involving a patient, visitor, or staff member, that may compromise safety, are expected to report it immediately via online UHC Safety Intelligence™ system formerly known as Patient Safety Net (PSN) program. See DHS policies 311, 311.1, 311.202, and 311.203 for more information on Event Reporting.

The Risk Manager or Medical Director may then decide if the event meets the criteria for a Critical Clinical Event, California Department of Public Health (CDPH) reportable event, and/or Joint Commission Sentinel Event. Any employee who has concerns about the safety or quality of care provided in the health care setting may also report these concerns to the Joint Commission directly at 800-994-6610, by fax at (630)792-5636, or by email at complaint@jointcommission.org.

Sentinel Events

A Joint Commission Sentinel Event is an unexpected occurrence involving death or serious physical or psychological injury, or the risk thereof. Serious injury specifically includes loss of limb or function. The phrase "or the risk thereof" includes any process variation for which a recurrence would carry a significant chance of a serious adverse outcome. Such events are called "sentinel" because they signal the need for immediate investigation and response. The terms "sentinel event" and "medical error" are not synonymous; not all sentinel events occur because of an error and not all errors result in sentinel events. Examples of Joint Commission Sentinel Events include:

- those events which result in unanticipated death or major loss of function, not related to the natural course of the patient's illness or underlying condition;
- abduction of any individual receiving care, treatment, or services;
- rape, assault which may lead to permanent loss or function, or homicide of any patient receiving care, treatment, or services or staff member, licensed independent practitioner, visitor, or vendor while on the facility premises.
- invasive procedure, including surgery, on the wrong patient, wrong site, or wrong procedure;
- a hemolytic transfusion reaction involving administration of blood or blood products having major blood group incompatibilities;
- discharge of an infant to the wrong family;
- unanticipated death of a full term infant;
- suicide of any individual receiving care, treatment or services in a staffed around-the-clock care setting or within 72 hours of discharge;
- unintended retention of a foreign object in a patient after a procedure or surgery
- severe neonatal hyperbilirubinemia (bilirubin > 30mg/dl); and
- prolonged fluoroscopy with cumulative dose >1500 rads to a single field or any delivery of radiotherapy to the wrong body region or >25% above the planned radiotherapy dose.

It is important to report a sentinel event as soon as you become aware of one to prevent further injury and harm to patients. In addition, Joint Commission accredited facilities are required to complete a root cause analysis and action plan within 45 calendar days of the event or of becoming aware of the event.

California Department of Public Health Reportable Events

In 1999, the Institute of Medicine's report, *To Err is Human,* raised the public's awareness regarding safety problems within healthcare organizations. Their report recommended the establishment of mandatory reporting systems for state governments to collect information about adverse events that result in death and serious harm.

The list of adverse events that must be reported to CPDH include:

Surgical Events
- Surgery on the wrong body part
- Surgery on the wrong patient
- The wrong surgical procedure performed on the patient
- Unintentional retention of a foreign object
- Unexpected death within 24 hours of anesthesia

Product or Device Events
- Patient death or serious disability associated with a contaminated drug, device or biologic
- Patient death or serious disability associated with the use or function of a device in which the device is used other than as intended
- Patient death or serious disability associated with intravascular air embolism

Patient Protection Events
- Infant discharged to the wrong person
- Patient death or serious disability associated with patient disappearance for more than four hours (excluding patients with competency or decision-making capacity)
- Patient suicide or attempted suicide resulting in serious disability after admission to the facility

Care Management Events
- Patient death or serious disability associated with a medication error
- Patient death or serious disability associated with a hemolytic transfusion reaction due to administration of ABO-incompatible blood or blood products
- Maternal death or serious disability associated with labor and delivery in a

low-risk pregnancy (including events that occur within 42 days post-delivery)

- Patient death or serious disability directly related to hypoglycemia

- Death or serious disability, including kernicterus, associated with failure to identify and treat hyperbilirubinemia in neonates during the first 28 days of life

- Stage 3, 4, or unstageable ulcer, acquired after admission to the facility (does not include stage 3 ulcers that progress from a stage 2 ulcer that was identified on admission).

- Patient death or serious disability due to spinal manipulative therapy

Environmental Events

- Patient death or serious disability associated with an electric shock

- Any incident in which a line designated for oxygen or other gas to be delivered to a patient contains the wrong gas or is contaminated by a toxic substance

- Patient death or serious disability associated with a burn while being cared for in a health facility

- Patient death associated with a fall while being cared for in a health facility

- Patient death or serious disability associated with the use of restraints or bedrails while being cared for in a health facility

Criminal Events

- Any instance of care ordered or provided by someone impersonating a physician, nurse, pharmacist, or other licensed provider

- Abduction of a patient of any age

- Sexual assault on a patient within or on the grounds of a health facility

- Death or significant injury of a patient or staff member from a physical assault that occurs within or on the grounds of a health facility

Other Events

- An adverse event or series of adverse events that cause the death or serious disability of a patient, personnel or visitor

CDPH must be notified of an adverse event (a) within five days after it has been detected or (b) within 24 hours after it has been detected if it is an ongoing urgent or emergent threat to the welfare, health, or safety of patients, personnel or visitors. Your facility Risk Manager or Administrator will make these reports to CDPH. CDPH may conduct an on-site inspection and investigation of these reported events.

Near Misses

A near miss is an incident or unsafe condition with the potential for injury or damage. A near miss may also be considered a "close call". Near misses are much more common than actual errors, in some studies up to 300 times more common. A near miss can involve actions related to medication, medical treatment, medical devices, visitors, or employees. For example, an incorrect medication that was drawn up but not given would be considered a near miss.

It is extremely important for staff to report not only errors, but near misses as well because of their frequency. Reporting of near misses allows your Patient Safety Officer to collect data and determine priorities for patient safety activities. Near miss data also provides an opportunity to identify weaknesses in the healthcare system and, most importantly, design systems that can prevent adverse events. A near miss should be reported in the same fashion that an error would be reported at your facility by way of notification to your supervisor, Risk Manager, or Patient Safety Officer or through the online UHC Safety Intelligence™ system formerly known as Patient Safety Net program.

COMMUNICATION

Communication breakdown is a major root cause of medical errors and near misses that threaten a patient's safety. The Joint Commission has reported that communication failures are leading cause of adverse events and close calls. The prevention of errors requires effective communication between you, your patients, and the staff that you work with.

Communication of Unanticipated Outcomes

An unanticipated outcome is one that differs significantly from that which was anticipated; it can be negative or positive. These outcomes do not necessarily occur as the result of substandard care, error, or negligence. They may occur even when the standard of care has been met.

DHS recognizes that maintaining effective communication with patients and their families is the first step to involving patients as active members of their healthcare team. Effective communication and providing accurate information about any unanticipated outcome assists them in making important healthcare decisions. In addition, the Joint Commission requires that patients and, when appropriate, their families, are informed about the outcomes of care, treatment, and services that have been provided, including unanticipated outcomes. When you become aware of any unanticipated outcomes, you are advised to:

- Talk with your supervisor and develop a communication plan before speaking about the unanticipated outcome with the patient/family members.

- Be prepared to participate in a root cause analysis to help identify the cause of the unanticipated outcome and develop ways to prevent the event from happening again.

- Be aware that unanticipated outcomes may also adversely affect the employees involved. The County of Los Angeles Employee Assistance Program (EAP) is available to confidentially help employees dealing with difficult job situations. EAP is accessible at: (213) 738-4200 or by internet at http://cao.lacounty.gov/EAP

For additional information on the process and policy for communication of unanticipated outcomes, see DHS Policy 311.201.

Medical Record

The primary function of the medical record is to communicate to members of the health care team the needs and plans for the patient as well as the patient's response to treatments. The medical record is a legal document and content should be written clearly and concisely. The health care providers are expected to meet the organizational expectation in learning how to use the new electronic medical record called, On-line Real time Centralized Health Information Database (ORCHID) and to follow the organizational standards and policy regarding the use of the medical record, such as the proper use of abbreviations within their facility. For specific instructions on documentation, refer to DHS Policy 390.1. Patients also have a legal right to access the information within the medical record. Check DHS Policy 391 and your facility policy to determine how the release of the medical record is handled.

Communicating with Staff/Team Communication

The Joint Commission has recommended specific measures to improve communication between staff including reducing the use of verbal orders, requiring a "read back" of verbal orders and critical test results, using a standardized approach to communicate with other staff, and performing face-to-face handoff communication when changing shifts.

The receipt, documentation, and timely communication to the responsible licensed provider of care of critical results of tests and diagnostic procedures reports is an especially important component of patient safety. Communicating these abnormal results within an established timeframe may help to prevent life-threatening situations. DHS recommends that any test results or orders that are received verbally or by telephone are written down, read back, and verified. Two patient identifiers

should be used to correctly identify the patient prior to receiving this information. In certain situations such as during a Code or in the operating room, it may not be possible to do a formal "read-back." In such cases, "repeat-back" is acceptable. Check with you facility for the proper process and timeframe required for documenting critical results and verbal/telephone orders.

The Health Insurance Portability and Accountability Act (HIPAA) of 1996, dictates that confidential patient information should only be shared with healthcare providers who need the sensitive information for their job functions. Staff must take extra caution not to discuss a patient's care with someone other than a healthcare provider or insurance company without a patient's consent. Discussion of the patient's care plan should be conducted privately in a location that is not accessible to a third party.

SBAR
One of the most effective methods for improving communication between staff, endorsed by the DHS Patient Safety Program, is the SBAR technique. The SBAR technique is an effective tool that provides a common and predictable format to communication and can be used in almost any setting. Improved team communication using SBAR has been found to decrease time to treatment, increase nurse satisfaction with communication, and improve the resolution of patient issues post-intervention.

SBAR stands for:
Situation: what is going on with the patient?
Background: what is the clinical background?
Assessment: what do you think the problem is?
Recommendation: what would you do to correct the problem?

The SBAR technique for communication provides a concise and brief way to communicate important information in a manner that all staff are familiar with. The person making the call knows the information that will be needed before calling, and the person receiving the call knows what information to expect.

Behavior that Undermines the Culture of Safety
Safe, high quality patient care requires a collaborative environment characterized by open communication and teamwork at all levels. All members of the healthcare team should be treated in a respectful, dignified manner. Behaviors that undermine the culture of safety can be overt with verbal outbursts and physical threats, or passive as manifested by uncooperative attitudes. DHS does not tolerate this kind of behavior or any intimidating behaviors which may undermine a culture of safety and has published a Code of Conduct and DHS Policy 747.300

to provide clear guidelines and expectations for staff conduct. Examples of behaviors that undermine the culture of safety include the use of profane or disrespectful language, physical threats or throwing objects, sexual comments or inappropriate touching, racial or ethnic jokes, refusing to perform assigned tasks without good reason, reluctance or refusal to answer questions or respond to phone calls or pages, and use of condescending language, voice intonation, inappropriate impatience, or other behavior that has the effect of suppressing input by other members of the healthcare team.

Communicating with Patients

Communication problems have been consistently identified as a leading cause of system breakdown by the Institute of Medicine (IOM) and the Joint Commission, leading to increased morbidity and mortality rates. Communication is affected by limited health literacy and cultural diversity of the patient population. Health literacy is defined as the "capacity of an individual to obtain, interpret, and understand basic health information, products and services, and the competence to use such information and services in ways which are health enhancing." The National Assessment of Adult Literacy (NAAL) 2003 report, noted that nearly 50% of all adults have below basic to proficient level of health literacy. Based on the results of the NAAL survey, patients in the DHS system are very likely to have problems in health literacy. Other challenges to effective communication in the medical encounter include:

- anxiety and intimidation related to encounters with highly trained healthcare providers
- stress of seeking health care services
- cultural and linguistic differences between patients and healthcare providers
- time constraints during brief patient-provider encounters
- confusion related to unfamiliar terminology used by healthcare providers

The Joint Commission requires the evaluation of potential difficulties with communication and learning in the initial assessment of patients. In addition to cultural barriers, potential problematic areas are developmental, cognitive, physical, vision or hearing impairments, language skills, lack of motivation, and religious issues. To learn more about health literacy, please see "Health Literacy Universal Precaution Toolkit" by the US Agency for Healthcare Research and "Quality and National Partnership for Action to End Health Disparities Toolkit: Toolkit for Community Action" by the Department of Health and Human Services.

Patient Education

Patients are partners for effective communication. Inviting patients to restate what you have discussed and/or asking questions about what you have discussed, is called "teach back". The "teach back" process helps to ensure that the patient has understood the information given. Simply asking "do you understand?" will not be an accurate indicator that the patient comprehends what has been discussed. An example of an effective and non-intimidating way to do "teach back" is by asking patients to tell you in their own words what was just discussed. Another technique is the "show me" approach. Healthcare providers can demonstrate to a patient a desired skill (i.e., checking a blood sugar level or using an asthma inhaler) then asking the patient to demonstrate the skill to ensure adequate patient understanding. Another patient education tool, recommended by the National Patient Safety Foundation, is the "Ask Me 3" program. The program encourages patients to ask the following three questions during their medical encounter:

1) What is my main problem?
2) What do I need to do?
3) Why is it important for me to do this?

Inviting the patient to bring a family member or friend with them to medical encounters may improve the education process as well. Patients should be advised to bring a list of their health concerns and medications they are currently taking (preferably in their original bottles) to their visit. Patients can also be educated about taking a pro-active role in their care through the use of DHS Patient Safety Committee developed patient safety education brochures for inpatients, outpatients, and patients needing surgery. These brochures have been translated into multiple languages and are available on the DHS Quality, Risk and Safety Sharepoint intranet site under the Safety sub-site.

Use of Interpreters

Limited English Proficiency (LEP) may lead to communication barriers that impede access to health care, compromise the quality of care, and contribute to medical errors. For those LEP patients, it is important that active communication take place with the assistance of an interpreter. Beginning in 2012, the Joint Commission's standards required the availability of qualified interpreters. An interpreter is a designated bilingual employee, staff interpreter, contracted telephone or in-person interpreter, or designated bilingual volunteer, who is qualified to interpret the information given to a patient and any questions that the

patient may have. Key points to remember when caring for LEP patients include:

- The patient has to be offered the services of a qualified interpreter if needed
- If the patient chooses to use a family member for interpretation, document their choice by stating the reason and the name of the person serving as the interpreter
- A person younger than 18 may not serve as an interpreter
- If an interpreter is used, it must be documented in the patient's medical record
- The Interpreter Attestation Form must be completed for those discussions that involve informed consent. If a telephone interpreter is used, staff must document the operator's ID number, and the date and time the activity took place

For more information on the use of interpreters see DHS Policy 314.2 "Documenting Use of Interpretation Services During Informed Consent Discussions", DHS Policy 318 "Non-English and Limited English Proficiency", "Providing Healthcare to Limited English Proficient Patients", and "A Patient-Centered Guide to Implementing Language Access Services in Healthcare Organizations" by the US Department of Health and Human Services.

Upset / Angry Individual

Treatment for a health condition can be stressful and frustrating for patients and family members. The loss of control that patients and family members experience may lead to emotional instability and erratic behavior. Should you encounter this type of situation keep these following points in mind to prevent escalation of the outburst:

- Be patient, flexible, and positive
- Encourage verbal not physical expression
- Avoid public spectacles; be attentive to signs of distress
- Be empathetic, listen, and attempt to build trust
- Do not personalize, moralize or judge
- Do not challenge or ridicule
- Do not overreact or argue
- Do not promise something you cannot deliver
- Do not threaten or get defensive
- Keep yourself safe from potential injury
- Be prepared to call for additional help or security if situation gets out of hand

MEDICATION SAFETY

Medication safety revolves around all steps in the medication process, including prescribing, dispensing, administering, and monitoring. Medication safety encompasses the safety of the patient as well as the safety of all individuals involved in the handling, preparation, and administration of medication. While most medication errors do not result in harm to the patient, when harm does occur, the results can be fatal.

Medication errors are often related to inadequate communication, insufficient knowledge or training, inattention and distraction during preparation and/or administration, and improper route of drug administration. The use of unapproved abbreviations, illegible medication or prescription orders, Look-Alike/Sound-Alike Drug names, failure to check and document lab values and not performing medication reconciliation have also contributed to medication errors.

Patient Identification

Every time a patient receives care, treatment or services (including medications), they must be identified using two identifiers. Examples of acceptable identifiers may be the individual's name, the medical record number, or patient's birthdate. The room or bed number is never considered an identifier. Refer to your facility's policy for more information regarding appropriate patient identifiers.

Medication Error and Adverse Drug Event Reporting

Reporting all Adverse Drug Reactions (ADRs), medication errors, and near misses is essential to medication safety. Adverse Drug Events (ADE) by definition are injuries that result from the use of drugs. ADEs that are associated with medication errors are considered preventable, while those that are related to a medication side effect may or may not be preventable. Reporting all medication safety-related events allows the patient safety leaders at your facility to identify problematic systems and redesign these systems for improved safety. ADE reporting also enables the Food and Drug Administration (FDA) to effectively monitor the newly marketed medications for safety. By documenting and reporting the unsafe conditions, near misses, medication errors, and adverse drug events, you promote patient safety and significantly improve the quality of care provided to our patients.

Abbreviations

Abbreviations save time and are commonly used as a convenience in medical documentation. However, some abbreviations, symbols and dose designations are dangerous and should not be used. Many of these dangerous abbreviations are frequently misread and lead to serious mistakes which compromised the safety of our patients. The Joint Commission (TJC) requires accredited organizations to develop and implement a list of prohibited abbreviations although they maintain their own official "Do Not Use" list of abbreviations which must be incorporated by each organization. Your facility may have additional "Do Not Use" list of abbreviations aside from the official list of TJC. Be sure to check your facility's complete list and remember that these prohibited abbreviations should never be used in any physician's orders or medication-related documentation.

The Joint Commission restricted abbreviations include:

ABBREVIATIONS	POTENTIAL PROBLEM	PREFERRED TERM
U or u (unit)	Mistaken as zero, four or cc	Write "unit"
IU (international unit)	Mistaken as IV or 10	Write "international unit"
QD, q.d., qd (once daily) QOD, q.o.d., qod (once every other day)	Mistaken for each other. The period after the Q can be mistaken for an "I" and the "O" can be mistaken for "I"	Write "daily" and "every other day"
Trailing zero (5.0 mg) Lack of leading zero (.5 mg)	Decimal point is missed.	Write Xmg. Write 0.Xmg
MSO4 MgSO4	Confused for one another. Can mean morphine sulfate or magnesium sulfate.	Write "morphine sulfate" or "magnesium sulfate".

High Alert Medications

High alert medications are drugs that bear a heightened risk of causing significant patient harm when used in error. The consequences of error with these medications can be detrimental to a patient, may potentially result in serious patient's injury or death. To improve patient safety, the Joint Commission requires

the removal of concentrated electrolytes from patient care units and the standardization and limitation of the number of drug concentrations available within the organization. The Joint Commission also requires health care facilities to develop a list of "High Alert Medications" which require additional precautionary measures/processes during the preparation, storage, dispensing and/or administration of these medications. Although each facility may have its own modified list, the DHS Expected Practice List of High-Alert Medications includes:

- Antineoplastic agents
- Concentrated Potassium
- Heparin
- Insulin, (subcutaneous and IV)
- Magnesium sulfate injection (in all obstetrical areas only)
- Narcotic/opiate analgesics (patient controlled analgesia, Fentanyl continuous infusion and transdermal patches, and methadone)
- Neuromuscular blocking agents
- Sodium chloride solution > 0.9%
- Thrombolytics
- Warfarin/Coumadin
- Any medication administered via intrathecal or epidural routes

Look-Alike Sound-Alike Medications

The Joint Commission also requires an organization to annually review a list of Look-Alike/Sound-Alike medications and enact measures to prevent errors involving the mix-up of these medications. DHS follows the Joint Commission requirements and has implemented several other methods to prevent patient injury from Look-Alike/Sound-Alike medications. These preventative methods include physically separating the Look-Alike/Sound-Alike medications in work areas, limiting the number of drug concentrations available, and using TALLman labeling to highlight the differences in medication names (e.g. oxyCODONE and OxyCONTIN).

Patient Controlled Analgesia

Patient Controlled Analgesia (PCA) is an effective method for controlling pain when used as prescribed and administered appropriately. However, PCA is also associated with a heightened risk of causing severe patient harm, and as a result, is included in the DHS Expected Practice list of High Alert Medications. Serious adverse events can occur when family members, caregivers or clinicians who are not authorized to administer PCA doses, do so. The unauthorized administration of PCA doses by someone other than the patient is known as "PCA by proxy". Root cause analysis of harm occurring as a result of PCA by proxy usually involves family members and/or unauthorized individuals administering doses in an attempt to keep the patient comfortable.

Several recommendations for preventing adverse events related to PCA administration include the following:

- Ensure the utilization of established criteria for PCA use in the selection of patients, medications, and dosing regimens

- Carefully monitor patients who are on PCA medications for the risk of respiratory and cardiac depression

- Teach patients and family members/caregivers about the proper use of PCA and provide them with written instructions on the PCA's use (in their preferred language)

- Instruct family/caregivers NOT to administer PCA doses

- Use warning tags on the PCA delivery patient's control that states, "Only patients should press this button"

Your facility may have other specific methods for preventing PCA adverse events. Review your facility PCA policy for more details.

Equianalgesic Opioid Dose Conversion

Opioid rotation is the process of changing opioids or the route of administration in order to improve clinical outcomes. Overdosing or underdosing patients may occur if equianalgesic dosing is not considered when changing the type or route of opioid analgesics. Equianalgesic dosing tables should be referenced when

converting patients between opioids to guide efficacy and safety. These tables provide relative potencies of major opioid agents and differentiate between the available routes of administration. Below is a comparison of frequently used opioids.

DRUG	IV EQUIVALENT	PO EQUIVALENT
Morphine	10 mg	30 mg
Hydromorphone	1.5 mg	7.5 mg
Fentanyl	0.1 mg (100 mcg)	N/A
Oxycodone	N/A	20 mg
Hydrocodone	N/A	30 mg

Equianalgesic dose tables like those above provide good guidance, but clinical judgment based on patient characteristics (age, co-morbidities, and hepatic/renal function) and the unique properties of certain opioids must be taken into account. When switching between different types of opioids, the dose of the new opioid should be reduced to account for differences in tolerance.

Anticoagulant Safety

In 2008 the Joint Commission added a National Patient Safety Goal (NPSG) to reduce the likelihood of patient harm associated with the use of anticoagulant therapy. Anticoagulants such as unfractionated heparin, low molecular weight heparins, and warfarin when used at therapeutic doses, are prone to adverse events because of complex dosing, strict monitoring requirements and problems with patient compliance. Patient, family and staff education addressing the signs and symptoms of bleeding complications, interactions related to diet and other medications, medication compliance and follow-up monitoring are critical components of anticoagulant safety. Use of approved protocols for initiation and maintenance of anticoagulant therapy, including policies outlining the baseline and ongoing laboratory tests that are used for monitoring, are required. In 2012, The Joint Commission expanded this NPSG requiring individualized care of patients on anticoagulants which includes face to face interaction with a trained professional who will closely monitor the patient's INR levels and risk conditions. Oral unit-dose products, prefilled syringes or premixed infusion bags with programmable infusion pumps may also reduce the possibility of anticoagulant medication administration errors.

Medication Labeling

Errors, sometimes tragic, have resulted from the mix-up of medications and solutions removed from their original containers and placed into unlabeled containers. Medications in unlabeled containers are unidentifiable. The Joint Commission requires labeling of all medications, medication containers, and other solutions, both on and off the sterile field, in perioperative and other procedural areas. Medication containers include syringes, medicine cups, and basins. Some general rules in labeling medications are:

- Labeling occurs when any medication or solution is transferred from the original packaging to another container and not immediately administered. Such labeling occurs immediately after preparation.

- Labels should include the drug name, strength, quantity, diluent, and volume if not apparent from the container, date prepared, expiration date when not used within 24 hours, and expiration time if less than 24 hours.

- Remove all labeled containers on the sterile field at the conclusion of a procedure and discard their contents.

- Immediately discard any medication or solution found unlabeled.

- All medications and solutions, and their labels, are reviewed by entering and exiting staff responsible for the management of medications.

For more information, review the NPSG 03.04.01.

Tubing Misconnections

Disastrous consequences can result when medications, tube feedings, contrast agents or other substances meant for intravenous, epidural, or feeding tube administration are inadvertently connected and administered through another route. This can occur because unintended tubing connections are possible. Examples of tubing misconnections include:

- Intravenous (IV) infusions connected to epidural lines, and epidural solutions connected to peripheral or central or IV catheters

- Infusions intended for IV administration connected to an indwelling bladder catheter or nasogastric tube

- Primary IV solutions administered through various other functionally dissimilar catheters, such as external dialysis catheters, ventriculostomy drains, an amnio-infusion catheter, and distal ports of a pulmonary artery catheters

Tubing misconnections can be prevented by following the recommendations below:

- Always trace a tube or catheter from the insertion site on the patient to the point of origin before connecting any new device or infusion

- Re-check connections and trace all patient tubes and catheters to their sources upon the patient's arrival to a new setting or service, or during change of shift, as part of the hand-off process. Standardize this "line reconciliation" process

- Never attempt to force or "Gerry-rig" a connection that does not fit easily and securely into an access port

- For certain high-risk catheters (e.g., epidural, intrathecal, arterial), label the catheter and do not use catheters that have injection ports

Medication Reconciliation

Medication errors frequently occur during transitions of care. Omitted and incorrectly timed doses, therapeutic duplication, and drug-drug interactions are potential issues that may arise if medication reconciliation is not done appropriately. Preventing the occurrence of these issues is the goal of medication reconciliation. This is a process where all of the patient's medications, including over the counter, as needed, and herbal medications and supplements, are reviewed and compared with the prescribed medications. The information on this list is updated when the patient's medication regimen is modified. Current and accurate medication reconciliation information is essential to safe transitions of care. Patients (or their family) should be provided with written information about the medications they will be taking when discharged from the hospital or at the end of an outpatient visit. The importance of managing medication should be explained to the patient, and include examples, such as instructing the patient to give a list of their medications to their primary care physician, updating the list any time changes are made, and to carry their medication information with them at all times. Check for the procedures in place at your facility related to medication reconciliation, as different care settings have different Joint Commission requirements.

TRANSFUSION SAFETY

Transfusion safety involves the overall process of correctly selecting and delivering blood or blood products to a patient. Transfusion of the wrong blood or blood product remains one of the most common hazards of transfusion and one of the primary causes of death attributed to transfusion. Transfusion of the wrong blood or blood product occurs at a prevalence thousands of times higher than transfusion related transmission of hepatitis and HIV. Transfusion of the wrong blood or blood product is generally the result of identification errors: mislabeled blood samples (correct patient's blood, but incorrect label), miscollected blood samples (correct label, but incorrect patient's blood), and misidentifying the patient or blood unit at the time of transfusion. Patient identification both at the time of the blood draw and prior to initiating the transfusion is the most important step in ensuring safe transfusion. For this reason, The Joint Commission requires that all specimens (not just blood) are labeled in the presence of the patient. When administering blood or blood products, use a two-person identification process or a one-person identification process accompanied by automated identification technology, such as bar coding (when this becomes available). When using a two-person identification process, one person is the qualified transfusionist who will be administering the blood or blood component and the second individual is qualified to participate in the process (as defined by your facility). As with any procedure, treatment, or service, the patient must be identified using two facility approved identifiers. Identification of the patient should always include active communication when possible. Follow your facility's patient identification policy for the proper use of two identifiers.

Prior to administering the transfusion, the following must be verified using a two person verification process:

1. Physician's order to transfuse. Match the blood or blood component to the order

2. Informed consent

3. Comparison of two patient identifiers between the patient and the blood transfusion record

4. Comparison of information on the component bag with the information on the compatibility label (unit number, blood group of the component, blood group of the patient)

5. Date and time of expiration of the blood component

6. Visual inspection of the blood component to look for clots, color changes, or other abnormalities

If any discrepancy or abnormality is found during the above steps, the transfusion must not be initiated until the discrepancy is resolved or abnormality explained.

Upon starting the blood transfusion be sure to sign, date, and chart the transfusion in the patient's health record. Be alert for any possible adverse transfusion reactions. If a transfusion reaction is suspected:

1. Stop the transfusion immediately. Maintain an open IV line with normal saline.

2. Recheck the identification on blood product container and blood product record against patient's identification band.

3. Contact the patient's physician as soon as possible.

4. Initiate a transfusion reaction investigation following your facility's protocol.

INFECTION PREVENTION AND CONTROL

Hospital Acquired Infections (HAI)

HAIs are infections caused by a wide variety of common and unusual bacteria, fungi, and viruses during the course of receiving medical care. Every patient that enters a healthcare facility is at risk for developing a HAI. The Centers for Disease Control and Prevention (CDC) reports that in American hospitals alone, healthcare associated infections account for an estimated 1.7 million infections and 99,000 associated deaths each year. These infections include:
- Urinary tract infections
- Surgical site infections
- Pneumonia
- Bloodstream infections

Your facility leaders track the rates of HAIs as they are now required to be reported to the CDC through the National Healthcare Safety Network (NHSN). NHSN is the source used by federal and State agencies for the public reporting of your facility's data related to HAI rates.

Catheter Associated Urinary Tract Infections

Catheter associated urinary tract infections (CAUTIs) are the most common type of healthcare associated infection accounting for 30% of all infections reported in

the hospital. Urinary drainage systems can serve as a reservoir for multi-drug resistant bacteria and a source of transmission to other patients. CAUTIs may result in blood stream infections which lead to increased morbidity and mortality.

There are several best practices and prevention strategies for reducing the incidence and risk of CAUTIs. Check with your facility to determine how these practices are implemented in your setting.
- Use aseptic techniques for catheter site preparation, equipment, and supplies
- Secure catheters for unobstructed urine flow and drainage
- Maintain the sterility of the urine collection system, especially when collecting specimens
- Replace the urine collection system when required
- **Limit the use and duration of urinary catheters where possible**

Surgical Site Infections (SSI)

SSIs occur in patients undergoing surgery. Certain risk factors may contribute to the occurrence of SSIs including, absence of surgical antibiotic prophylaxis, use of razors for hair removal, improper aseptic technique, choice of skin antisepsis preparation and patient factors (e.g., diabetes, obesity, smoking, a weakened immune system, current infected status, etc).

There are several best practices and prevention strategies for reducing the incidence and risk of SSIs. Check with your facility to determine how these practices are implemented in your setting.

- Administer antimicrobial agents for prophylaxis for a particular procedure or disease according to methods cited in scientific literature or endorsed by professional organizations.
- Do not remove hair at the operative site unless the presence of hair will interfere with the operation; if you need to remove hair, use a method that is cited in scientific literature or endorsed by professional organizations
- Control blood glucose levels during the immediate postoperative period in patients undergoing cardiac surgery
- Ensure normothermia during surgery
- Use appropriate skin preparation agents
- Educate patients, and their families as needed, who are undergoing a surgical procedure about SSI prevention.

Ventilator Associated Events (VAE)
[also known as ventilator associated pneumonia]

Ventilator Associated Events (VAEs) are one of the most common infections acquired by patients in the ICU. Pneumonia may arise when bacteria enters the sterile lower respiratory tract by way of the endotracheal tube, contaminated equipment or medications. Recent improvements in the care of ventilated patients suggest that most cases of pneumonia are preventable. Risk factors for VAE include prolonged intubation, enteral feeding, aspiration, use of paralytic agents, underlying illness, and extremes of age.

There are several best practices and prevention strategies for reducing the incidence and risk of VAEs. Check with your facility to determine how these practices are implemented in your facility.

- Elevation of head of bed. Example, put mechanically ventilated patients (except those with medical contraindications) in a semirecumbent position with the head of the bed at 30-45 degrees
- Daily "sedation vacations" and assessment of readiness to extubate.
- Peptic ulcer disease prophylaxis
- Deep vein thrombosis prophylaxis
- Perform daily oral care using a chlorhexidine based product
- Follow policies on the disinfection, sterilization, and maintenance of respiratory equipment

Central Line Associated Bloodstream Infections (CLABSI)

CLABSIs can occur in any patient who has (or had) a short or long term central line catheter (e.g,. triple lumen catheters, peripherally inserted central catheters, Hickman/Groshong catheters, dialysis catheters). Certain risk factors may contribute to the occurrence of CLABSIs, including prolonged duration of catheterization, contamination at the insertion site or catheter hub, site of the catheter, prolonged hospitalization prior to catheterization, administration of intravenous total parenteral nutrition administration, and patient factors such as a weakened immune system and prematurity. Outcomes associated with CLABSI include increased mortality, increased length of hospital stay, and increased patient costs.

Although CLABSI prevention was initially focused on the ICU setting due to higher incidence patterns, CLABSIs are now becoming a concern in non-ICU areas (wards, hemodialysis areas, etc.) as well.

There are several best practices and prevention strategies for reducing the incidence and risk of CLABSIs. Check with your facility to determine how these practices are implemented in your setting.

Implement central line insertion practices (CLIP) which includes:
- Performing hand hygiene before catheter insertion or manipulation
- Implementing maximal sterile barrier precautions during central line catheter (CLC) insertion (requires the use of a cap, mask, sterile gown, sterile gloves, and large sterile drape). See also DHS Policy 335 for additional information
- Avoiding femoral line insertion if possible in adults
- Use chlorhexidine solution for skin preparation before central line insertion. If available, also use chlorhexidine for maintenance of catheters
- Assess the CLC necessity daily.
- Use a facility established catheter checklist (electronic or paper) to ensure adherence and documentation of CLIP

Promote and/or practice specific catheter maintenance interventions:
- Disinfect catheter hubs, needleless connectors, and injection ports before accessing the catheter
- Change CLC dressings (with or without chlorhexidine) when soiled or as policy dictates
- Use a standardized supply cart or kit that contains all necessary components for CLC insertion and/or maintenance
- Replace CLC tubing as defined by your facility policy
- Use antimicrobial caplocks for CLC if available
- Use antimicrobial ointments for hemodialysis catheter insertion sites only
- Use antimicrobial-impregnated catheters for adult patients if available
- Prior to insertion of a central venous catheter, educate patients/their families on their role on CLABSI prevention.

Drug Resistant Organisms

Methicillin-/Oxacillin- Resistant Staphylococcus Aureus
Methicillin-Resistant Staphylococcus Aureus (MRSA), or Oxacillin-ResistantStaphyloccus Aureus (ORSA) is an antibiotic resistant type of bacteria that can cause skin, blood, surgical site, urinary, and respiratory infections. MRSA/ORSA occurs most frequently among patients who undergo invasive medical procedures, have weakened immune systems, or are being treated in hospitals, nursing homes, or dialysis centers.

There are several best practices and prevention strategies for reducing the incidence and risk of MRSA infections. Check with your facility to determine how these practices are implemented in your setting.

- Follow the CDC hand hygiene guidelines
- Test patients being admitted to the hospital for MRSA/ORSA based on the California Department of Public Health criteria and also those who show signs of MRSA/ORSA infection
- Follow your facility's process for identifying readmitted or transferred patients that may have MRSA/ORSA
- Use contact precautions for MRSA/ORSA colonized or infected patients
- Prior to discharge from the hospital, provide oral and written education to patients/families regarding aftercare and precautions to prevent the spread of infection.

Vancomycin-Resistant Enterococci (VRE)

VRE is a type of bacteria that is resistant to vancomycin, which can cause infections of the urinary tract, the bloodstream, or of wounds. VRE occurs more frequently in patients who have been previously treated with vancomycin or other antibiotics for long periods of time, are hospitalized, have weakened immune systems, have undergone surgical procedures of the abdomen or chest, or have long term urinary or central line catheters. The best measures for preventing a VRE infection is proper hand hygiene and contact isolation once the patient is identified with the organism until cleared. Be sure to follow your facility's process for identifying readmitted or transferred patients that may have VRE.

Clostridium Difficile

Clostridium difficile infection (CDI), is the most common cause of antibiotic associated diarrhea and can lead to the development of pseudomembranous colitis, an inflammatory condition of the colon that can lead to dilation of the colon, sepsis, and death. Risk factors for CDI include prior or current antibiotic administration, gastric acid suppression, hospitalization, and advanced age. It is important to note that *C. difficile* can survive in the environment for long periods of time in a spore form and therefore may be difficult to kill with usual cleaning products.

There are several best practices and prevention strategies for reducing the incidence and risk of CDI. Check with your facility to determine how these practices are implemented in your setting.

- Use contact precautions for CDI patients
- Ensure proper cleaning and disinfection of equipment and the environment. **Bleach products are recommended.**
- Use soap and water for hand hygiene. **Alcohol-based hand sanitizers are not effective against *C. difficile*.**
- Follow your facility's process for identifying readmitted or transferred patients that may have CDI
- Educate patients and their families about CDI and how to prevent its spread
- Discontinue antibiotics as soon as they are no longer indicated

Multiple Drug Resistant (MDR) Gram Negative Bacteria

There are several types of MDR gram negative bacteria, many of which are responsible for causing significant disease in the healthcare patient population. Examples of multiple drug-resistant gram negative bacteria may include Escherichia coli, Pseudomonas, Klebsiella, Serratia, and Acinetobacter. These bacteria can cause various forms of infections in the respiratory tract, wounds, blood, or urinary tract. Because of their propensity to become resistant to multiple antibiotics, infections related to gram negative bacteria may be very difficult to treat requiring extensive hospitalization and therapy. Depending on the type of gram negative bacteria involved, and the location of infection, prevention strategies vary, but at a minimum involve strict adherence to hand hygiene practices. Consult your Infection Prevention Department to determine which prevention strategies you should use if your patient is found to have a multiple drug resistant gram negative infection. Also, be sure to follow your facility's process for identifying readmitted or transferred patients that may have a gram negative infection.

Healthcare Workers (HCW) and Infection Exposure

Sharps Injuries
According to the CDC, over 1,000 hospital-based healthcare providers sustain an injury from contaminated needles and other sharp devices during the delivery of care. Nursing staff is the most frequently injured group with most of those injuries occurring in the patients' room. Another large proportion of sharps injuries occur in the operating room. Needlestick injuries in the operating room are the most common type of injury, followed second by scalpel injuries. Injuries can occur while handling or passing a sharps device after it has been used, recapping a device, manipulating a device in a patient, transferring potentially infectious material between containers, or during

disposal and clean up. Any worker handling sharp devices or equipment such as scalpels, sutures, hypodermic needles, blood collection devices, or phlebotomy devices is at risk. The same techniques used to protect workers from sharps injuries can also protect patients. Simple measures to reduce the risk of sharps injuries include:

- Not recapping used needles
- Using sharps containers for disposal of all single use sharps
- Utilizing devices with specifically designed sharps safety features, such as needleless and blunt tip systems.

Bloodborne Pathogens

The Occupational Safety Health Administration (OSHA) estimates that healthcare workers (HCWs) in the health care industry and related occupations are at risk of occupational exposure to bloodborne pathogens. Bloodborne pathogens are pathogenic microorganisms that are present in human blood and can cause disease in humans. Example of these pathogens include Human Immunodeficiency Virus (HIV), Hepatitis B Virus (HBV), Hepatitis C Virus (HCV), and others. To prevent exposure to bloodborne pathogens, HCWs must use Standard Precautions. Standard Precautions means you should treat all human blood and body fluids as if they were known to be infected with bloodborne pathogens. Treat all blood and other potentially infectious materials with appropriate precautions such as the use of gloves, masks, and gowns if exposure is anticipated.

If an exposure to bloodborne pathogens or a contaminated sharps injury occurs, immediately wash affected area or flush mucosal membrane (eyes, nose, mouth), report incident to supervisor and seek medical follow-up per facility protocol.

Other Communicable Diseases

Follow standard and transmission-based precautions to prevent exposure to other communicable diseases. If exposure occurs, report incident to supervisor and follow facility protocol.

INFECTION PREVENTION AND CONTROL MEASURES

Only few infection control measures will be discussed in this section. Please consult your Infection Control Department for more information as appropriate.

HAND HYGIENE

Successful hand hygiene has been shown to reduce the transmission of dangerous bacteria and reduce the overall rates of infection. In particular the CDC has recommended the use of alcohol-based handrubs by health care providers because they overcome many of the obstacles to traditional hand washing measures. Furthermore, **alcohol based handrubs have been shown to be generally more effective than traditional soap and water except for *C-difficile* cases.**

In those areas where alcohol based handrubs are not available, handwashing with soap and water remains a sensible strategy for hand hygiene compliance. When using soap and water, effective hand washing requires that you rub your hands together for at least 15 seconds. When using alcohol based handrubs, the product should be applied to the palm of one hand, and then rubbed with both hands together, covering all surfaces of the hands and fingers until the hands are dry. Any time the hands are visibly soiled they should be washed with soap and water.

Consult the DHS policy 392.3 on hand hygiene for additional information.

NOTE: Compliance with the DHS hand hygiene policy is expected from all employees and is a strict condition of employment. Employees in violation of this policy can experience progressive discipline for non-compliance.

ARTIFICIAL NAILS

The CDC also recommend against the wearing of artificial nails by health care providers. Health care workers who wear artificial nails are more likely to harbor gram-negative bacteria on their fingertips, both before and after handwashing, than are those who have natural nails. In the LADHS system, direct patient care staff and patient health care workers who have contact with patient supplies, equipment, and food, are prohibited from wearing artificial fingernails and long natural fingernails. Natural nails must be clean, with tips less than 1/4 inch long. If fingernail polish is worn, it must be in good condition, free of chips, and preferably clear in color.

ISOLATION PRECAUTIONS

Isolation/transmission-based precautions prevent the transmission of infection between infected patients, caregivers and other patients and visitors. Patients are placed in isolation when they are known or suspected to have infections that can be transmitted through the air, by droplet, direct or indirect contact

The 3 types of Isolation / Transmission-Based Precautions are listed below:

Airborne - occurs by dissemination of either airborne droplet nuclei or dust particles containing infectious agents that may remain suspended in the air for long periods of time. Airborne microorganisms (such as tuberculosis and varicella) can be dispersed widely by air currents. Precautions include:

• Putting the patient in a private room with a negative air pressure and frequent air exchanges, wearing respiratory protection (N95 Respirator) when entering the room, and limited movement and transport of the patient.

• When a patient is transported, the patient must also wear a mask.

Droplet - droplets are generated from the source person during coughing, sneezing, or talking, and during the performance of procedures such as suctioning and bronchoscopy. Transmission occurs when droplets containing the microorganisms (such as types of pneumonia, pertussis, or scarlet fever) are propelled a short distance through the air and are deposited on the host's eyes, nasal mucosa or mouth. Precautions include:

• Putting the patient in a private room, when available, or
• Cohorting of patients with the same organisms;
• Wearing a mask when in close contact with the patient;
• Limiting movement and transport of the patient outside of the room; and
• When the patient is transported, the patient must also wear a mask.

Contact – involves direct and or indirect contact with microorganisms such as: Clostridium difficile, diphtheria, herpes simplex/zoster, impetigo, scabies and multi-drug resistant bacteria such as MRSA/ORSA and VRE. These exposures are initiated by skin-to-skin contact which causes physical transfer of microorganisms. Precautions include:

• Placing the patient in a private room, donning gowns and gloves upon entering the room (and removing them when leaving)
• Limiting transport of the patient, and dedicating the use of patient-care equipment to one patient.

CARE OF PATIENT CARE EQUIPMENT

Patient care equipment is a common potential source of infection. All patient care equipment should be cleaned with a hospital approved detergents/disinfectants following manufacturers' instructions for appropriate contact time after use. Equipment that is dirty shall be placed in a designated dirty equipment area, or sent to the appropriate cleaning services department for decontamination. Only soiled equipment is stored in the "dirty" area. Only clean equipment is stored in the clean equipment area. Equipment will not be stored on, or immediately around, the sink. If it is unclear whether the patient care equipment is clean, it should be considered dirty and cleaned before patient use.

USE OF PERSONAL PROTECTIVE EQUIPMENT (PPE)

PPE's such as gown, gloves, mask, goggles, and face shields are barriers that can be used to prevent exposure to blood, body fluids, and airborne organisms during care and treatment of patients.

• Follow procedure for donning or removing PPEs.

• When using PPE be sure to discard PPEs per hospital procedures.

SAFE INJECTIONS PRACTICES

The following recommendations apply to the use of needles, cannula that replace needles, and, where applicable, intravenous delivery systems:

• Use aseptic technique to avoid contamination of sterile injection equipment.

• Do not administer medications from a single syringe to multiple patients, even if the needle or cannula on the syringe is changed.

• Needles, cannula and syringes are sterile, single-use items. They should not be reused for another patient or to access a medication or solution that might be used for a subsequent patient.

• Use fluid infusion and administration sets (i.e., intravenous bags, tubing and connectors) for one patient only and dispose of appropriately after use.

• Consider a syringe or needle/cannula contaminated once it has been used to enter or connect to a patient's intravenous infusion bag or administration set.

• Use single-dose vials for parenteral medications whenever possible.

• Do not administer medications from single-dose vials or ampules to multiple patients or combine leftover contents for later use.

- If multi-dose vials must be used, both the needle or cannula and syringe used to access the multi-dose vial must be sterile.

- Do not keep multi-dose vials in the immediate patient treatment area and store in accordance with the manufacturer's recommendations; discard if sterility is compromised or questionable.

- Do not use bags or bottles of intravenous solution as a common source of supply for multiple patients.

SURGICAL AND PROCEDURAL SAFETY

The peri-operative environment poses many potential challenges to ensuring patient safety. Several factors contribute to these challenges including emergency surgery, patient risk factors (e.g., obesity), multiple procedures, multiple practitioners, unusual equipment, and lack of access to pertinent information. The topics below present some of the obstacles to patient safety encountered in the peri-operative and procedural environment.

Surgical Fires

Out of the 65 million surgeries performed each year in the United States, it is estimated that there are 550 - 650 surgical fires each year. Three elements must be present for fires to take place: oxygen, heat (to light the fire), and fuel (something to catch on fire).
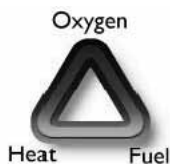
Removal of one of these elements extinguishes a fire. The most common ignition sources (heat) are electrosurgical equipment and lasers.

The following are recommendations to reduce the risk of surgical fires:

- Conduct a fire risk assessment at the beginning of each procedure. The highest risk procedures involve an ignition source, delivery of supplemental oxygen, and the operation of the ignition source near the oxygen (e.g., head, neck, or upper chest surgery).

Use appropriate precautionary measures when using the following:

- oxygen
- (flammable) alcohol- based skin preparation
- surgical equipment and other devices

Ensure that you are familiar with your facility's plan on how to manage surgical fires. For example, understand how to extinguish a fire burning on a patient, know the evacuation procedures, participate in fire drills, and keep water/saline available for extinguishing fire.

Wrong Site, Wrong Procedure, Wrong Person Surgery

The occurrence of wrong site, wrong procedure, or wrong person surgery can be devastating to the patient and staff involved. DHS is committed to eliminating the potential for surgical errors by following the Joint Commission's "Universal Protocol for Preventing Wrong Site, Wrong Procedure, Wrong Person Surgery". The complete protocol can be viewed on the Joint Commission website at www.jointcommission.org.

Wrong site/procedure/person surgery can be prevented by implementing the follow steps:

1. Conduct a pre-procedure verification process to make sure that all relevant documents and related information or equipment are: available prior to the start of the procedure; correctly identified, labeled and matched to the patient's identifiers; reviewed and are consistent with the patient's expectations and with the team's understanding of the intended patient, procedure and site. Preprocedure verification may occur at more than one time and take place before the procedure. It is best performed when the patient can be involved.

2. Mark the surgical site before the procedure, involving the patient in the marking process whenever possible. At a minimum sites are marked when there is more than one possible location for the procedure. For spinal procedures, special intraoperative imaging may be used in addition to site marking for locating the exact vertebral level. The site shall be marked by a licensed independent practitioner who is ultimately accountable for the procedure and will be present when the procedure will be performed. In limited circumstances, the practitioner may delegate this responsibility. The method for marking the site must be unambiguous, permanent enough to be visible after skin preparation, and used consistently throughout the facility. Check your facility policy to determine what method to use for site marking, when site marking can be delegated, and how to handle those circumstances where site marking may not be possible (such as patient refusal or extreme infant prematurity).

3. Performing and documenting in the patient's medical record, a 'time-out' immediately before beginning the surgery. Active oral communication between all members of the surgical team occurs during this time-out to verify the correct patient (using two identifiers), site, and procedure. The time-out is standardized by the facility, initiated by a designated member of the team, and includes all members of the surgical team. During a time-out activities are suspended so that team members can focus on active confirmation of the patient, site, and

procedure. The procedure is not started until all questions or concerns are resolved. When two or more procedures are being performed on the same patient, and the person performing the procedure changes, a time-out shall be performed before each procedure is initiated.

Unintended Retained Foreign Objects

The unintended retention of foreign objects (URFOs) also called as retained surgical items (RSIs) after any procedure can cause patient's death, and surviving patients may suffer from both physical and emotional harm. Some examples of URFOs are sponges, towels, broken parts of instruments, stapler components, parts of laparoscopic trocars, guidewires, pieces of drains, needles, sharps, and malleable retractors. According to Joint Commission, from 2005 to 2012, there were about 772 incidents of URFOs, 16 deaths resulted from these incidents, and 95% of these cases resulted in additional care and/or extended hospital stay. URFO is a CDPH reportable adverse event, a reviewable sentinel event by Joint Commission, and can also be an opportunity for litigation. URFO incidents can occur in operating room, labor and delivery areas, ambulatory care centers, and other areas where invasive procedures are performed (i.e., Cath lab, GI lab, interventional radiology, and emergency room). DHS encourages taking the following actions to prevent and minimize occurrence of unintended retained foreign objects:

- Sponges, sharps, instruments, and related miscellaneous items should be counted (without interruption) before, during, and after any surgery or procedure in which the possibility exists that an item could be unintentionally retained
- Surgical counts should be documented on the patient's intraoperative record
- Foreign objects that are to be removed from the surgical site should be xray detectable (radiopaque)
- Non radiopaque sponges should not be placed in the operative wound if it is possible
- Members of the operating room team should inspect the integrity of all instruments prior to use, and any instruments broken during a surgical procedure should be accounted for
- Individuals performing the procedures should execute a careful and thoughtful exploration of the operative or procedural site before the closure of the wound and/or operative or procedural field
- Distractions in the operating room should be kept to a minimum
- When a discrepancy is discovered, a search should be undertaken to recover the missing foreign object
- Radiologic tests should be performed when sponges, sharps, or instruments are unaccounted for

For more information, refer to Joint Commission's Sentinel Event Alert on Preventing unintended retained foreign objects issued in October 2013.

BED ENTRAPMENT, RESTRAINTS, PATIENT FALLS AND PRESSURE ULCERS

Injuries from bed entrapments, restraints, and falls are an increasingly common occurrence. These injuries predominately occur in elderly patients and those with pre-existing conditions such as confusion, restlessness, lack of muscle control, or a combination of these factors

Bed Entrapment

Today there are about 2.5 million hospital and nursing home beds in use in the United States. Between January 1, 1985 through January 1, 2013, The U.S. Food and Drug Administration reported 901 incidents of patients caught, trapped, entangled, or strangled in beds with rails. Of these reports, 531 people died, 151 had a non-fatal injury and 220 were not injured because staff intervened. Injuries generally occurred when the patient was entrapped from either of the following:

1) through the bars of an individual side rail;
2) though the space between the head and foot side rails;
3) between the side rail and mattress; or
4) between the headboard or footboard, side rail and mattress.

The automatic use of bed rails may pose unwarranted hazards to patient safety. Some types of beds have been linked to a higher risk of entrapment. These beds include air pressure mattresses (either overlay air mattresses placed on top of a regular mattress or beds with built-in air mattresses, often used for treating or preventing pressure ulcers) and canopy-like padded beds covered with nylon netting that is zipped into place. The latter are often used for patients who are cognitively impaired, have unpredictable behavior, spasms, seizures, and other disorders. Certain models of these types of beds have "entrapment zones" where a patient can be trapped and suffocated. Please check with your facility Risk Manager or Patient Safety Officer if you believe you might have one of these beds in your patient care area.

You can help prevent patient injury from bed entrapments by adhering to the following guidelines:

- Avoid the automatic use of bed rails of any size or shape

- Restrict the use of physical restraints, including chest, abdominal, wrist, or ankle restraints of any kind on individuals in bed

- Inspect, evaluate, maintain, and upgrade equipment (i.e., beds/mattresses/bed rails) to identify and remove potential fall and entrapment hazards and appropriately match the equipment to patient needs while considering all relevant risk factors

- Re-assess the patient's needs and re-evaluate the equipment if an episode of entrapment or near-entrapment occurs, with or without serious injury. This should be done immediately because fatal "repeat" events can occur within minutes of the first episode

- Request for an orientation and training on entrapment dangers, assessment of patients for entrapment risk (as appropriate) specific to your patient population and care environment

- Request for training on specialty beds/mattresses preferably from the bed manufacturer's representative or another staff member with an expert knowledge on the specific bed(s)

Decisions regarding the use or removal of bed rail should be made within the framework of an individual patient assessment. If a bed rail has been determined to be necessary, steps should be taken to reduce the known risks associated with its use. The individual patient assessment includes:

- Medical diagnosis, conditions, symptoms, and/or behavioral symptoms
- Sleep habits
- Medication
- Comfort (i.e. pain, thirst, hunger, positioning)
- Acute medical or surgical interventions
- Underlying medical conditions
- Existence of delirium
- Ability to toilet self safely
- Cognition
- Communication
- Mobility (in and out of bed)
- Risk of falling

Restraints

Physical restraints are any manual method or physical or mechanical device, material, or equipment that immobilizes or reduces the ability of a patient to move his or her arms, legs, body, or head freely. Chemical restraints include any drugs or medications used as a restriction to manage a patient's behavior which is not a standard treatment or dosage for the patient's condition. The following restraint standards apply to any behavioral healthcare setting, or any medical situation in which the changes in a patient's behavior are caused by a medical condition.

- All restraints require a physician's order
- Non-behavioral restraints are used for non – violent patients who are pulling out lines, endotracheal tubes, IVs etc.
- Behavioral restraints are used to manage violent or self-destructive behavior
- Time limits on length of order apply
- A face to face evaluation by an MD or licensed independent practitioner with clinical privileges must be completed within one hour of applying behavioral restraints.

Keep in mind the following "rules" related to restraints:

1) patients have the right to be free from physical or mental abuse and corporal punishment; restraints will only be used when necessary and not as coercion, discipline, convenience, or retaliation

2) restraints should only be used when other less restrictive measures have failed

Asphyxiation is a leading cause of restraint related deaths. Asphyxiation is related to factors such as: putting excessive weight on the back of the patient while in the prone position; placing a towel or sheet over the patient's head to protect against spitting or biting; and obstructing the airway when pulling the patient's arms across the neck area. Other factors that may contribute to an increased risk of death are: restraining patients who smoke; restraining patients with deformities that preclude the proper application of the restraint (especially vest restraints); restraining a patient in the supine position or prone position (may predispose the patient to aspiration or suffocation), and restraining a patient in a room that is not under continuous observation by staff. Suggested strategies to reduce the risk of injury or death related to restraints include:

- Reducing the use of physical restraints by considering alternative interventions to physical restraint such as sitters/safety attendants, diversion, verbal de-escalation, and administering ordered psychotropic medications

- Ensuring that all staff have orientation/education regarding restraint application and the alternatives to physical restraints

- Continuously observing any patient who is restrained

- Never covering a patient's face while restrained

- If restrained in the supine position, ensuring that the head is free to rotate to the side, and when possible, the head of the bed is elevated to minimize the risk of aspiration

- Ensure that the airway is unobstructed at all times

After applying restraints, patients should be continuously monitored to ensure the patient's safety and physical comfort, and to verify that the restraints are in good working condition and properly applied. Patients should also be continuously reassessed for the need of restraints. Restraints should be removed promptly when the patient no longer meets criteria for restraint use. Where needed, restraint keys must be immediately accessible at all times. Check your facility's policy for the proper observation and and documentation requirements for patients in restraints.

Patient Falls

In 2010, The Joint Commission reported that sentinel events related to falls were the sixth most common sentinel event reported. The Joint Commission defines a patient fall as a witnessed or unwitnessed, unplanned descent to the floor (or extension of the floor such as a trash can or other equipment) regardless of the cause (fainting, slippery floor, etc.) or extent of injury. Falls also include those descents to the floor that may be eased by a staff member's attempt to minimize the impact. The most common root cause identified for falls was related to problems with patient assessment. Many of those reported sentinel events resulted in serious injury or death. In review of the sentinel events, key risk factors attributable to the falls were identified. The Joint Commission found that most of the patients were elderly, and also had an altered mental status, either as a result of chronic mental illness, acute intoxication, or medication administration (such as sedation). History of prior falls, anticoagulant use, urinary urgency, and recent environmental change were also associated risk factors in the falls. Reducing the risk of falls requires all members of the health care team to follow some basic concepts including:

- Utilize age appropriate fall assessment/screening tools specific to your health care setting

- Assess and reassess the patient for risk for falling daily, during an inter-unit transfer, if there is any change in the patient's condition, and/or after a patient's fall incident

- Observe and follow the DHS System–Wide Fall Prevention Program Policy 311.101

- Take action to address any identified risks noted

- Instruct patients to use the call light when help is needed and ensuring call lights are within reach before leaving the patient's bedside

- Respond to call lights quickly

- Return the patient's bed to a low position and lock the brakes when finished providing care

- Increasing frequency of nursing rounds

- Orient patients to the bathroom, shower and other patient areas

- Remain in bathroom with patients who are at high risk for falls

- Remove environmental hazards from the patient area such as unnecessary furniture

- Educate patients and families about fall prevention measures

- Initiate the Post Fall Evaluation and Management Algorithm

Pressure Ulcers

The National Pressure Ulcer Advisory Panel (NPUAP), defines a pressure ulcer as a localized injury to the skin and/or underlying tissue, usually over a bony prominence, as a result of pressure, or pressure in combination with shear and/or friction. Pressure ulcers develop from a combination of situations and factors when too much pressure is applied to one area for a long period of time. The pressure is usually caused by the hard surface of a bed against a bony prominence such as the sacrum. The tissue between these two surfaces is crushed and begins to die. The tissue closest to the bone is typically the first tissue to die, and visible skin

Areas where pressure sores most often occur

The end of your "tail" bone (Sacrum).

Where your hip is (Trochanter).

Your "sit" bone (Ischium).

Foot bony areas, like your ankles

Heel

discoloration or redness may actually be an indicator of underlying fat or muscular death. It may be difficult to detect skin "redness" for individuals with dark skin tones. In this situation the only sign may be a darkening of the skin tone. The picture to the right shows the most common areas for the development of pressure ulcers. Due to dead tissue which serves as a host for bacteria, infection is a constant threat.

Aside from the pain, discomfort, and potential for infection, the cost of treating a pressure ulcer-related hospitalization ranges from $16,755 to $20,430. Infected pressure ulcers can increase this cost substantially. A few simple steps can be taken to help prevent the occurrence of pressure ulcers:

- Perform an assessment for the risk of skin breakdown and pressure ulcer formation at the time of admission and again at regular intervals

- Ensure that the following identified risk factors are addressed: dry skin; poor nutrition, immobility/inactivity; incontinence; friction and shear, very thin or obese body habitus; poor blood sugar control; and poor blood supply

- Perform and document a head to toe observation of the skin on admission and frequently thereafter

- Provide frequent changes in position as medically able. A "turn clock" as recommended by the ICU Effective Practices Committee can be used to remind staff when to turn patients.

- Avoid vigorous massage

- Use protective support devices to reduce pressure (e.g. pillows, wedges, specialized beds)

- Use lifting devices such as a trapeze or bed linen when moving patients

- Identify and correct nutritional deficits

The different stages of pressure ulcers, as defined by the NPUAP, are summarized below.

Deep Tissue Injury (Suspected): Purple or maroon localized area of discolored intact skin or blood-filled blister due to injury of the additional layers of tissue below.

Stage I: Intact skin with non-blanchable redness, however, its color may differ from the surrounding area; often over a bony prominence.

Stage II: Some loss of dermis appearing as a shallow open ulcer with a red pink

wound bed slough. It may also present as an intact or open serum-filled or serosanguineous filled blister.

Stage III: Full-thickness tissue loss with the visibility of subcutaneous fat. It may also include undermining and tunneling.

Stage IV: Full-thickness tissue loss with exposed bone, tendon, or muscle. Slough or eschar (tan, brown, or black) may be present; often includes undermining and tunneling.

Unstageable: Full-thickness tissue loss in which the base of the ulcer is covered by slough (yellow, tan, gray, green or brown) and/or eschar (tan, brown or black) in the wound bed.

A Stage 3, Stage 4 or unstageable pressure ulcer that is acquired after admission to a healthcare facility must be reported to the California Department of Public Health. Excluded from this reporting requirement is ulcer progression from Stage 2 to Stage 3 if the Stage 2 ulcer was recognized at the time of admission.

DIAGNOSTIC PROCEDURE SAFETY

Significant advances in technology have greatly improved the methods for diagnosis.

Magnetic resonance imaging (MRI), computed tomography (CT) and other radiological studies, while improving diagnostic methods, also present new patient safety concerns. To prevent considerable risk of injury such as burns or any other adverse reactions from the diagnostic procedure, the patient's complete medical history must be obtained including but not limited to the presence of implanted prosthesis or devices and dye allergies. The ordering physician's order and patient's identity must be verified before initiation of each diagnostic procedure.

In addition, the facility must follow the manufacturer's recommendations on the equipment's quality control, testing, and preventive maintenance activities and should maintain the diagnostic imaging equipment properly calibrated as required and/or according to the facility's standard policy.

MRI Safety

The MRI machine uses powerful magnetic fields to obtain detailed images of organs and tissues in the body without the use x-rays. The Joint Commission, in reviewing recent events related to the use of MRIs, has reported that the most common injury from MRIs is related to burns. The majority of these burns resulted from the use of wires and leads. Less common injuries, but potentially more deadly, are from the unintentional introduction of iron containing objects near the MRI magnet. These objects, if brought too close to the magnet, become missiles that can seriously injure

a patient or staff member. Special care must be taken to screen patients and any individuals entering the MRI room. Patients should be asked to remove all personal belongings including hearing aids, wallets, coins, hair clips, electronic devices, and jewelry. Patients should also be screened for implantable items such as pacemakers, catheters, clips, cochlear implants, and medication pumps that might have iron in them and become dislodged during the MRI scanning process. Access to the MRI suite should be restricted only to staff who have been appropriately trained and screened. Potential projectile items, such as oxygen tanks, monitors, sandbags, cleaning supplies, and fire extinguishers should be removed from the room, properly secured by an authorized MRI technician, or replaced with a non-ferromagnetic equipment. Staff should remember that the MRI magnet is always on, even when a patient is not being scanned. Therefore, in the event of a cardiopulmonary arrest or code, resuscitation must never take place in the MRI room. In addition, any electrical connections, such as monitoring cables, must be visually checked for integrity and safely positioned by the technician. During the MRI procedure, patients should be provided with ear protection because of the loud noises associated with the MRI exam. The Joint Commission has published a set of specific recommendations for ensuring MRI patient safety in their February 2008 Sentinel Event Alert.

These recommendations can be viewed from their website at www/jointcommission.org/SentinelEvents.

Radiation Safety

Many of the diagnostic tools used today use radiation to show detailed internal physical images. While patient exposure to radiation during routine testing is a relatively safe method for diagnosis, all attempts should be made to prevent patient injury resulting from radiation. It is important to maintain radiation doses as low as reasonably achievable (ALARA) when obtaining the needed diagnostic information. Prior to conducting any imaging study, verify the patient's identification, imaging site, and correct patient positioning. Except for patients who require the radiological exam, only the staff needed for the procedure should be in the room during the exposure. Patients who are at a reproductive age should have the reproductive organs shielded when the radiological exam does not require exposure to that part of the body. Pregnancy status of women who are of reproductive age shall be determined prior any radiological exam except in emergencies. If pregnancy exists or is suspected, the physician should be notified before the exam to determine whether the exam should proceed. For all patients, great care should be taken to keep the radiation exposure to a minimum requiring

just enough to produce an acceptable diagnostic image. Be aware of potential exposure to radiation by observing for posted radiation warning signs. In addition, radiation rooms will have warning lights that illuminate during radiation exposure. In the event of a radiological incident, follow your facility's posted emergency procedures. Some radiological procedures require patients to stand or sit in certain positions. Caution should be taken to ensure that patients who are unsteady are not placed into positions that may allow them to fall. The positioning of the patient may need to be modified to prevent patients from falling or otherwise injuring themselves during the radiological exam.

For more information, refer to Joint Commission's revised diagnostic imaging standards issued on December 2013 and the Sentinel Event Alert on the Radiation risks of diagnostic testing issued on August 2011.

PATIENT TRANSPORTATION SAFETY

Transporting or transferring patient from one unit to another always involves some degree of risk. To ensure patient safety and to minimize the risks involved, it is important to provide the appropriate personnel and suitable equipment during the patient's transfer/transport. Handoff communication should be given by the transporter to the staff receiving the patient upon arrival.

Qualified and appropriately skilled staff members should accompany patients who require continuous physiologic (i.e. cardiac, ventilator, etc.) monitoring. During transport, all siderails should be raised until the patient is ready to be transferred to another bed. Prior to transfer to a new bed, brakes should be securely locked to prevent patient falls or employee injury. Some patients bring their own seated walker to their clinic or hospital visits. Staff must never use the patient's seat walker as a substitute for a wheelchair when transporting the patient. The patient's chart and registration card should accompany the patient during intrafacility transfers to the receiving unit or diagnostic testing location and confidentiality of patient's health information should be maintained during transport. Please check your facility's policy and DHS Policies 373, 373.1, 373.2, and 373.3 for additional information on both interfacility and intrafacility transfers.

(seat walker should NOT be used as a wheelchair)

EQUIPMENT SAFETY

Physiologic Alarms

Many medical devices have physiologic alarm systems which are essential to provide safe care to patients. These include cardiac monitors, bed alarms, apnea alarms, pulse oximetry devices, ventilators, IV pumps, etc. The alarm signals from these devices alert caregivers the changes in patient's condition that require immediate intervention. However, if these physiologic alarms are not managed appropriately it may compromise patient safety. In June 2013, The Joint Commission announced a renewed NPSG for hospitals on clinical alarm safety. According to FDA, there were about 560 medical alarm- related deaths over a recent four-year period. TJC reported 98 alarm related events from Jan 2009 to June 2012, 80 resulted in death, 13 in permanent loss of function, and 5 in unexpected additional care or extended stay. The Joint Commission identified the following risk points that contribute to alarm and monitoring-related adverse events: alarm fatigue, communication breakdown, staff training issues, and equipment failures. To help prevent risks associated with physiologic alarms, staff must know how to use the medical devices used in their work unit, request for training if not completely familiar with the medical device, follow their facility-specific protocols on the medical device alarm settings, thoroughly inspects and ensures that the medical device is in good working condition prior to use, and appropriately prep the patient before connecting to a medical device. Remember, physiologic alarms must be audible despite background noise and should never be muted or turned off, even if they become distracting. Instead, investigate the cause of the alarm and take measures to address the cause.

For more information on alarm system safety, read NPSG 06.01.01.

Preventative Maintenance

Electronic medical equipment is generally maintained by your facility's Biomedical Department. Routine maintenance ensures that equipment is functioning properly and is free from potential hazards. As an employee, you are responsible for the safe operation of equipment including reporting when it is broken or involved in a patient care incident. To ensure the proper use of equipment and prevent patient harm, follow these guidelines:

DO

- Conduct any assigned daily checks on equipment
- Remove broken equipment from the patient care area
- Label/tag broken equipment
- Notify the Biomedical Department of the broken equipment

DO NOT

- Operate equipment if not trained
- Attempt to repair equipment
- Use unauthorized extension cords
- Calibrate or change settings on equipment if not authorized to do so

Emergency Power

In the event that your facility should lose power, back-up generators are available to maintain core electronic functions. Red outlet plugs are located in each unit and patient room and are directly connected to an emergency power supply. All critical patient support systems, (i.e. ventilators), should be plugged into these red emergency outlets. Your facility should have written contingency plans for staff to follow during a loss of electrical power. Be sure to find out where such plans are in your facility.

ENVIRONMENTAL SAFETY

Our environment can be rapidly and unexpectedly affected by a man-made or natural disaster such as disaster, fire, flood, or spill. It is critical that all employees assess for the risk of, and respond appropriately to these situations.
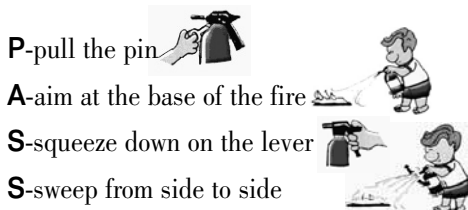
Fire

Including the potential for fire in the operating room discussed earlier, fire remains a real and devastating occurrence in the healthcare setting. The use of flammable gases and agents predisposes the healthcare setting to these risks. If a fire occurs in your area follow these instructions:

- Remove (R) any patient(s)/person(s) from the immediate danger and to a safe location
- Activate (A) the fire alarm and notify the emergency operator by dialing your facility's internal emergency number or 911 (when applicable)

- Contain (C) the fire and smoke by closing the door and doors in the area if safe
- Extinguish (E) the fire only if safe to do so by using the proper extinguisher and evacuate patients and/ persons from the area of the fire and move to a safe location

To extinguish a fire follow the **PASS** system using an appropriate fire extinguisher.

P-pull the pin

A-aim at the base of the fire

S-squeeze down on the lever

S-sweep from side to side

Earthquake

Severe earthquakes can and have occurred in Southern California. Although many healthcare facilities have been reinforced to prevent collapse and damage during an earthquake, this does not remove the danger altogether. If you are working at the time of an earthquake, remember these important points:

- Remain calm
- Secure the and protect the patient if safe
- Protect yourself and patient - take cover, drop, cover, and hold
- After the movement stops, begin assessing patients or co-workers for injury
- Assess surroundings for damage
- Standby for instructions from your leadership

Spill/Release

 Often chemicals are used for preserving tissue, treating medical conditions, and cleaning which may be toxic and harmful when in direct contact to the human skin. If you come across with a spill or release of a chemical, you should immediately remove patients/staff from the surrounding area. If possible close the door to confine any vapors and call the facility's internal emergency number or 911, where applicable. Obtain the appropriate safety data sheet (SDS) used to be known as material safety data sheet (MSDS) and provide the information to the responding team. Restrict access to the affected area until cleared by the appropriate responding team or per facility's policy.

Tips for a Safe Environment

There are a few things that you can do to help keep your environment safe at all times. These include:

- Keeping work areas free of clutter; items should be 18 inches from the ceiling and boxes should be placed on a pallet
- Doors and walls should not be cluttered with loose combustible items (i.e., paper, strings, tissue paper, etc.)
- Documents posted should be laminated
- Ensuring that all exits, fire doors, fire extinguishers, fire alarms, and sprinklers are not obstructed
- Placing cords safely behind desks and out of walkways
- Using proper facility approved electrical cords and small appliances
- Refraining from using any kind of wedges to keep doors open
- Conducting "drills" in your area to ensure that everyone is knowledgeable and comfortable with your facility's safety procedures. These drills should also be documented.

OTHER SAFETY ISSUES

Patient Security

Part of the healthcare provider's responsibility for patient safety comes in assuring that security measures are in place. Patients are dependent on their healthcare providers and have lost some of their ability to protect their person and belongings that they would normally have in their own homes. Strategies that can be used to increase a patient's security include:

- Wear a clear and visible DHS issued identification badge at all times when at work
- Introduce yourself to the patient and other healthcare workers who may be working with you for the patient's care
- Stop strangers in your work area and question who they are and why they are in your area
- Instruct patients to question anyone who attempts to render care without a facility ID badge (remind patients that a stethoscope or a lab coat does not necessarily mean the person is a doctor)

Infant Abduction

Although the crime of infant abduction occurs very rarely, it is clearly a subject for great concern. Based on a study of cases from 1983 through 2012, the National Center for Missing and Exploited Children reported 288 infant abductions. In 132 of the cases studied, the infants were abducted from the premises of healthcare facilities. Texas and California had the highest number of infant abductions with 37 and 39 abductions respectively.

The typical abduction from a healthcare facility involves an "unknown" abductor impersonating a nurse, healthcare employee, volunteer, or relative. Because the length of stay in the obstetrical units is generally short and visitors are generally welcomed to visit, the number of new and changing faces is constant, making recognition of a "stranger" more difficult. Newborn infants also spend a great deal of time with their mothers where there is easier access to the infant than in the nursery. Most abductors may use this fact to "con" the infant directly from the mother. Mothers should be carefully instructed about how to identify a staff member with whom they may entrust their infants.

Healthcare staff should be alerted to any unusual behavior and question anyone who looks out of place. Be aware that a disturbance may occur in another area of the facility creating a diversion for the abductor. Also, be mindful of the fact that infants may need to be taken to many areas within the facility, and thus their safety and security must be maintained even outside of obstetrical and pediatric units.

Newborn Surrender

In January of 2006, the Safely Surrendered Baby Law was signed permanently into a state law. As of September 30, 2013, 560 newborns have been safely surrendered in California.

The law allows parents to give up their baby confidentially and without fear of arrest or prosecution as long as the baby has not been abused or neglected. A parent who is unable or unwilling to care for a baby within 3 days of birth can hand the baby to any employee at a Los Angeles County emergency room or fire station, and is not required to give any information as long as the infant shows no signs of abuse or neglect. The law allows a parent or person with lawful custody 14 days from the time of surrender to reclaim their baby. For this reason, staff will give the parent and the infant matching bracelets. The parent should be asked, but is not required to fill out a medical questionnaire designed to gather important medical information, which is useful in caring for the child. If you work in the emergency room, review your facility policy on newborn surrender and determine the process to follow should someone present a newborn infant to you for surrender.

Patient Elopement and Patients Leaving Against Medical Advice (AMA)

While receiving treatment in the healthcare facility, patients are expected to remain in their assigned areas and alert staff if they want to leave. Patients who leave the assigned area without staff awareness are considered to have "eloped". Measures for preventing elopement include thoroughly assessing patients for confusion, placing confused patients closer to the nursing station, and instructing patients to remain on their assigned units while they are receiving treatment. Should a patient elope from the assigned area, follow your facility policy on patient elopement and document in the patient's chart the time the patient was noted missing and what actions were taken when the absence was discovered.

Every competent patient has the right to refuse treatment and the right to leave the hospital AMA. If your patient is an adult or legally emancipated minor and is not on any holds, and requests to leave AMA, follow your facility policy on patients leaving AMA. Document the patient's desire to leave AMA on your facility approved AMA form. If the patient refuses to sign the form, do not attempt to force their signature. Document the details of the event in the patient's chart including how you learned of the patient's plan to leave AMA, what you and the patient discussed, and any discharge instructions that were provided.

Patient Suicide

Patient suicide has ranked in the top five most frequently reported events to the Joint Commission since 1995. Of the 827 reports between 1995 and 2010, 25% of the suicides occurred outside of the behavioral health setting.

Patients in the general hospital setting use methods for suicide that are easily available, such as bell cords, bandages, restraints, and IV/oxygen tubing. Staff can help prevent suicide outside the behavioral health setting by following existing Joint Commission NPSG requirements including:

- conduct a risk assessment that identifies specific individual characteristics and environmental features that may increase or decrease the risk for suicide

- address the individual's immediate safety needs and most appropriate setting for treatment

- provide suicide prevention information (such as a crisis hotline number) when individuals at risk for suicide leave the facility

When patients are identified at risk for suicide, there are steps that can be taken to reduce the risk. Suggestions for reducing the risk of suicide in those patients

who may be at risk include:

- check the patient for contraband that could be used to commit suicide
- engage the patient and family in care planning and decision making taking into consideration cultural or age factors
- provide the patient with a "sitter" who can offer support and alert staff to imminent suicidal actions
- communicate the patient's risk for suicide and current status during any handoff procedures

CONCLUSION

DHS is committed to building a safe and just culture, but we know this change does not happen overnight nor can it happen without your participation. You, our employees, are on the frontline and are in the best position to identify issues and their solutions. We developed this handbook to guide you in your daily practice and to assist you in making your patients' care safer.

If you need additional information on DHS patient safety activities, please visit the DHS Patient Safety Program website located under Quality, Risk & Safety on the DHS Sharepoint Intranet at http://myladhs.lacounty.gov/SitePages/Home.aspx. If you have any questions or would like to report any patient safety concerns, inform the Patient Safety Officer at your facility, or you can email them to patientsafety@dhs.lacounty.gov or call the DHS Patient Safety Hotline at (213) 989-7233 or (800) 611-4365.